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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/660,871	09/11/2003	Ryoji Kubo	1232-5148	8637

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EXAMINER	
LE, TUAN H	
ART UNIT	PAPER NUMBER
2622	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/28/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/660,871	KUBO ET AL.	
	Examiner	Art Unit	
	Tuan H. Le	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-44* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-44* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Objections

Claims 41 and 44 are objected to because of the following informalities:

Claim 41, "..., said storage storing a program..." should be replaced by "..., said storage *medium* storing a program...".

Claim 44, "..., said storage storing a program..." should be replaced by "..., said storage *medium* storing a program...".

Claim 44, "..., realizing the image recording method described in claim *42*" should be replaced by "..., realizing the image recording method described in claim *43*".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5, 7-8, 10, 12-15, 21-25, 27-28, 30, 32-35, and 41-44 are rejected under 35 U.S.C. 102(e) as being anticipated by Lathrop (U.S. Pub. 2001/0020979 A1)

Regarding **claims 1, 21, 42, and 43** Lathrop discloses an image sensing apparatus (10), (see Lathrop, Fig. 1) comprising: an image sensor (16) that performs image sensing in response to an inputted image sensing instruction (26); a recording medium (32) that stores a sensed image; and a controller (22), (see Lathrop, paragraphs [0017] and [0018]) that controls to record on said recording medium the sensed image in a first format (TIFF) instead of a second format (JPEG)/ in addition to the sensed image in a second format (JPEG), different from the first format, which is designated in advance when a format change instruction (26) is designated by a user within a predetermined period after sensing the image.

As for **claims 2 and 22**, Lathrop discloses that the first format is a lossless compression format (TIFF) and the second format (JPEG) is a lossy compression format, (see paragraphs [0017] and [0018]).

As for **claims 3 and 23**, Lathrop discloses a memory (32) that stores a sensed image in the first format at least until the format change instruction is designated, (see Lathrop, claim 4 and Fig. 2).

As for **claims 4 and 24**, Lathrop discloses that said controller (22) controls the latest image data of the first format stored in said memory to be recorded onto said recording medium in response to the format change instruction, (see Lathrop, claim 10).

As for **claims 5 and 25**, Lathrop discloses that said controller (22) rejects the format change instruction while an image sensing operation is in progress in response to the image sensing instruction, (see Lathrop, claim 22).

As for **claims 7 and 27**, Lathrop discloses that said controller (22) controls at least one of information indicating whether or not there is any sensed image of the first format which has not been recorded onto said recording medium and information indicating whether or not each sensed image of the first format has been recorded onto said recording medium, and updates the information when a sensed image of the first format is recorded onto said recording medium in response to the format change instruction, (see Lathrop, paragraphs[0025] and [0026], wherein microprocessor checks to see how many unprocessed TIFF images exist and updates TIFF tags such as DateTime tag and Fnumber tag).

As for **claims 8 and 28,** as previous mentioned in the discussion of claims 7 and 27, Lathrop discloses all of the limitation of the parent claims. Furthermore, Lathrop discloses that the camera is ready to take another picture once the raw image is stored in the storage device by the microprocessor. Thus, it is inherent that the controller determines whether or not there is any sensed image of the first format recordable onto said recording medium based on the information when the format change instruction is inputted, and prevents a sensed image of the first format from being recorded onto said recording medium when it is determined that there is no recordable sensed image of the first format, (see Lathrop, paragraph [0025]).

As for **claims 10 and 30,** as previous mentioned in the discussion of claims 7 and 27, Lathrop discloses all of the limitation of the parent claims. Furthermore, Lathrop discloses that microprocessor (22) creates a new JPEG file from an oldest TIFF file, (see Lathrop, paragraph [0026]). Thus, it is inherent that microcontroller rejects the format change instruction in a case where the second format is a lossless compression format.

As for **claims 12 and 32**, as previous mentioned in the discussion of claims 1 and 21, Lathrop discloses all of the limitation of the parent claims. Furthermore, Lathrop discloses that a sensed image (step 110) is recorded in the second format on said recording medium until at least the format change instruction (step 130) is issued, (see Lathrop et al, Fig. 2).

As for **claims 13 and 33**, as previous mentioned in the discussion of claims 12 and 32, Lathrop discloses all of the limitation of the parent claims. Lathrop discloses that after the format change instruction(step 130) is issued, the sensed image of the second format (step 126) is erased from said recording medium, (see Lathrop et al, Fig. 2).

As for **claims 14 and 34**, as previous mentioned in the discussion of claims 13 and 33, Lathrop discloses all of the limitation of the parent claims. In addition, Lathrop discloses that microprocessor (22) processes unprocessed segments of the oldest TIFF format and writes correspondent information into JPEG header, (see Lathrop, paragraphs [0025] and [0026]). Thus, it is inherent that the microprocessor controls, when additional data is added to the sensed

image of the second format to be erased, the additional data to be added to a corresponding sensed image of the first format.

As for **claims 15 and 35**, as previous mentioned in the discussion of claims 13 and 33, Lathrop discloses all of the limitation of the parent claims. It is inherent that the erasure of the sensed image is performed in accordance with a capacity of said recording medium, (see Lathrop, paragraph [0028], wherein the resulting empty memory is used to store new image data).

As for **claims 41 and 44,** as previous mentioned in the discussion of claims 21 and 43, Lathrop discloses all of the limitation of the parent claims. Furthermore, Lathrop discloses that microprocessor (22) accesses program logic (24), memory buffer (20) and non-volatile storage device (32). Since microprocessor is programmed to perform predetermined operations, it is inherent that there is a storage medium storing a program that is executable by the data processing apparatus and comprises program codes realizing the image recording method described in claims 21 and 42.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 6, 9, 16, 26, 29, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lathrop (U.S. Pub. 2001/0020979 A1) and further in view of Sarbadhikari et al (E.P. 1,152,589 A2)

As for **claims 6 and 26**, as previous mentioned in the discussion of claims 1 and 21, Lathrop discloses all of the limitation of the parent claims. As previously mentioned, Lathrop discloses controller (22). Lathrop does not disclose a display unit used when recording the sensed image of the first format onto recording medium.

However, Sarbadhikari et al discloses operation display (30) connected to processor (20), (see Sarbadhikari et al, Fig. 2).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the operation display as described by Sarbadhikari the with the microprocessor as described by Lathrop so as to display at least one operation status of "Start recording", "Recording", and "Recorded" when recording the sensed image of the first format onto said recording medium because such combination enhances user interface for camera operators.

As for **claims 9 and 29,** as previous mentioned in the discussion of claims 8 and 28, Lathrop discloses all of the limitation of the parent claims. Furthermore, Sarbadhakari et al discloses a notification unit (30) connected to processor (20), (see Sarbadhakari et al, Fig. 2) wherein said controller controls the information to be notified by said notification unit when preventing recording onto said recording medium.

As for **claims 16 and 36**, as previous mentioned in the discussion of claims 1 and 21, Lathrop discloses all of the limitation of the parent claims. Lathrop does not disclose rejecting format change instruction when the capacity of said recording medium is less than a predetermined amount.

However, Sarbadhikari et al discloses remaining memory capacity for use by a camera, (see Sarbadhikari et al, column 1 lines 41-57).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the remaining memory capacity as described by Sarbadhikari into the electronic camera as described by Lathrop because such implementation prevents raw image data from being transferred and processed.

Claims 11 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lathrop (U.S. Pub. 2001/0020979 A1) and further in view of Anderson (U.S. Pat. 6,031,964)

As for **claims 11 and 31**, as previous mentioned in the discussion of claims 1 and 21, Lathrop discloses all of the limitation of the parent claims. Lathrop does not disclose the issue of format change instruction when a level drop of a power source.

However, Anderson discloses a power failure mode, in which main batteries are out of operation, that puts backup batteries in operation, (see Anderson et al, columns 4 lines 37-53).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the power failure mode as

described by Anderson into the electronic camera as described by Lathrop because such implementation can protect any image data currently being processed by a camera before shutdown occurs.

Claims 17-19 and 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lathrop (U.S. Pub. 2001/0020979 A1) and further in view of Nakamura et al (E.P. 1,133,167 A1)

As for **claims 17 and 37**, as previous mentioned in the discussion of claims 1 and 21, Lathrop discloses all of the limitation of the parent claims. Lathrop does not disclose that the predetermined period is the period until a next image sensing instruction is issued.

However, Nakamura et al discloses the flow chart operation, (see Nakamura, Fig. 7), wherein predetermined period is determined by following either the steps of ST1, ST8, ST9, and ST1 or the steps of ST1, ST8, ST10, ST11, ST12, and ST1.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the flow chart operation in which predetermined period is determined as described by Nakamura et al into the electronic camera as described by Lathrop because such implementation assures that the capture of the next image is always performed after raw data writing of the immediately preceding image frame.

As for **claims 18 and 38**, as previous mentioned in the discussion of claims 1 and 21, Lathrop discloses all of the limitation of the parent claims.

Lathrop does not disclose that the predetermined period is the period when the sensed image is displayed on a display.

However, Nakamura et al discloses the flow chart operation, (see Nakamura, Fig. 9), wherein predetermined period is determined by following the steps of ST28, ST29, ST30, and ST28.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the flow chart operation in which predetermined period is determined as described by Nakamura et al into the electronic camera as described by Lathrop because such implementation assures continuous display of taken images.

As for **claims 19 and 39**, as previous mentioned in the discussion of claims 1 and 21, Lathrop discloses all of the limitation of the parent claims. Lathrop does not disclose that the predetermined period is a period when electric power is supplied to the image sensing apparatus.

However, Nakamura et al discloses the flow chart operation, (see Nakamura, Fig. 11), wherein predetermined period is determined by following either the steps of ST41, ST42, ST43, ST44, and S4T1 or the steps of ST41, ST46-ST51, and ST41.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the flow chart operation in which predetermined period is determined as described by Nakamura et al into the electronic camera as described by Lathrop because such implementation assures that image capture or live view display can be performed.

Claims 20 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lathrop (US Pub. 2001/002079).

Regarding claims 20 and 40, Lathrop discloses the storage of image data in lossy and lossless compression methods. However, Lathrop does not teach the first format being lossy and the second format being lossless. However, one of ordinary skill in the art would have found it obvious to reverse the storage steps taught by Lathrop to change from the disclosed lossless first/lossy second to the claimed lossy first/lossless second. The order of compression formats is seen to fall within the level of a routineer in the art and would merely exercise the designer's order preference.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Sasson et al (U.S. Pat. 5,016,107) discloses an electronic camera employing digital processing of image signal, in which the digital processor compressed stream of processed image signal.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan H. Le whose telephone number is (571) 270-1130. The examiner can normally be reached on M-Th 7:30-5:00 F 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tuan Le
December 20, 2006.

DAVID OMETZ
SUPERVISORY PATENT EXAMINER